

**Amendments to the Claims:**

This listing of claims will replace all prior versions of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method for isolating anticoagulant heparin or anticoagulant heparan sulfate, the method comprising:

contacting ~~the~~ an affinity matrix with a mixture comprising anticoagulant heparin or heparan sulfate, wherein the affinity matrix comprises a fibroblast growth factor;  
and  
separating the non-bound material from the bound material.

Claim 2 (original): The method of claim 1 wherein the fibroblast growth factor preferentially binds to anticoagulant heparin or heparan sulfate compared to non-anticoagulant heparin or heparan sulfate.

Claim 3 (original): The method of claim 1 wherein the fibroblast growth factor is FGF7.

Claim 4 (original): The method of claim 1 wherein the fibroblast growth factor is a fusion protein.

Claim 5 (original): The method of claim 1 wherein the fibroblast growth factor is a glutathione-S-transferase-FGF7 fusion protein.

Claim 6 (original): The method of claim 1 wherein the mixture further comprises heparin that is not anticoagulant.

Claim 7 (original): The method of claim 1 wherein the mixture comprises crude heparin.

Claim 8 (original): The method of claim 1 wherein the mixture comprises low molecular weight heparin.

Claim 9 (original): The method of claim 1 wherein the mixture is an anticoagulant drug.

Claim 10 (original): The method of claim 1 wherein the affinity matrix comprises a fibroblast growth factor immobilized on a support.

Claim 11 (original): The method of claim 1 wherein the affinity matrix comprises a fibroblast growth factor immobilized on agarose.

Claim 12 (original): The method of claim 1 wherein the non-bound material is separated from the bound material by eluting the non-absorbed material.

Claim 13 (original): The method of claim 1 further comprising recovering the anticoagulant heparin.

Claim 14 (original): The method of claim 1 further comprising eluting the anticoagulant heparin.

Claim 15 (currently amended): A method for separating anticoagulant heparin or anticoagulant heparan sulfate from non-anticoagulant heparin or non-anticoagulant heparan sulfate, the method comprising:

contacting the an affinity matrix with a mixture comprising anticoagulant heparin or anticoagulant heparan sulfate and non-anticoagulant heparin or non-anticoagulant heparan sulfate, wherein the affinity matrix comprises a fibroblast growth factor that preferentially binds anticoagulant heparin or anticoagulant heparan sulfate compared to non-anticoagulant heparin or non-anticoagulant heparan sulfate;

separating the non-bound material from the bound material by eluting the non-bound material from the affinity matrix;

desorbing and eluting the bound material from the affinity matrix.

Claim 16 (original): An affinity matrix for isolating anticoagulant heparin or anticoagulant heparan sulfate, the matrix comprising a fibroblast growth factor immobilized on a support, wherein the immobilized fibroblast growth factor retains the heparin-binding specificity of the non-immobilized fibroblast growth factor.

Claim 17 (original): The matrix of claim 16 wherein the fibroblast growth factor preferentially binds anticoagulant heparin or anticoagulant heparan sulfate compared to non-anticoagulant heparin or non-anticoagulant heparan sulfate.

Claim 18 (original): The matrix of claim 16 wherein the fibroblast growth factor is FGF7.

Claim 19 (original): The matrix of claim 16 wherein the fibroblast growth factor is a fusion protein.

Claim 20 (original): The matrix of claim 16 wherein the fibroblast growth factor is a glutathione-S-transferase-FGF7 fusion protein.

Claim 21 (original): The matrix of claim 16 wherein the support is agarose.

Claim 22 (original): A method of preparing an affinity matrix for isolating anticoagulant heparin or anticoagulant heparan sulfate comprising providing a fibroblast growth factor that preferentially binds anticoagulant heparin or anticoagulant heparan sulfate compared to non-anticoagulant heparin or non-anticoagulant heparan sulfate and immobilizing the fibroblast growth factor onto a support.

Claim 23 (original): The method of claim 22 wherein the fibroblast growth factor is FGF7.

Claim 24 (original): The method of claim 22 wherein the fibroblast growth factor is a fusion protein.

Claim 25 (original): The method of claim 22 wherein the fibroblast growth factor is a glutathione-S-transferase-FGF7 fusion protein.

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Claim 26 (original): The method of claim 22 wherein the support is agarose.

Claims 27-48 (cancelled without prejudice).